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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KEE YEAN NG and WEN UA OU

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Appeal 2009-007195  
Application 10/616,759  
Technology Center 2800

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Before ROBERT E. NAPPI, MAHSHID D. SAADAT, and THOMAS S.  
HAHN, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

This is a decision on appeal under 35 U.S.C. § 134(a) of the rejection of claims 7 and 18 through 24.

We affirm.

### INVENTION

The invention is directed to a method of fabricating an LED light source. *See* Page 2 Appellants' Specification. Claim 7 is reproduced below:

7. A method for fabricating a light source comprising:  
    mounting a chip having a primary light source on a substrate,  
    said primary light source emitting light of a first wavelength;  
    connecting power terminals on said chip to corresponding  
    power terminals on said substrate for powering said primary light  
    source; and  
    mounting a performed transparent cap over said chip, said cap  
    comprising a wavelength-converting material for converting a portion  
    of said light of said first wavelength to a second wavelength, wherein  
    said transparent cap comprises a spherical surface and has a constant  
    thickness.

### REFERENCES

Reeh	US 2001/0000622 A1	May 3, 2001
Kawae	US 2002/0080501 A1	Jun. 27, 2002
Lin	US 2003/0098651 A1	May 29, 2003
Mueller-Mach (Mach)	US 6,630,691 B1	Oct. 7, 2003
Shiiki	US 6,762,551 B2	Jul. 13, 2004
Ibbetson	US 2005/0093430 A1	May 5, 2005

## REJECTIONS AT ISSUE

The Examiner has rejected claims 7, 19, and 21 through 24 under 35 U.S.C. § 102(b) as being anticipated by Kawae. The Examiner's rejection is on pages 4 and 5 of the Answer.<sup>2</sup>

The Examiner has rejected claims 7, 18 through 21, and 23 through 24 under 35 U.S.C. § 102(e) as being anticipated by Ibbetson. The Examiner's rejection is on pages 5 and 6 of the Answer.

The Examiner has rejected claim 24 under 35 U.S.C. § 102(e) as being anticipated by Shiiki. The Examiner's rejection is on page 6 of the Answer.

The Examiner has rejected claims 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kawae in view of Lin. The Examiner's rejection is on page 7 of the Answer.

The Examiner has rejected claims 22 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Reeh in view of Mach. The Examiner's rejection is on pages 7 and 8 of the Answer.

## ISSUES

*Rejection under 35 U.S.C. § 102(b) based on Kawae.*

Appellants' contentions, on pages 8 through 11 of the Brief,<sup>3</sup> with respect to this rejection present us with the issue: did the Examiner err in finding that Kawae teaches a cap with a constant thickness? Appellants'

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<sup>2</sup> Throughout this decision we refer to the Examiner's Answer dated September 25, 2008.

<sup>3</sup> Throughout this decision we refer to the Appeal Brief dated May 30, 2008

arguments on pages 8 through 11 of the Brief group claims 7, 19, 21, and 23 together and separately address independent claim 24. Accordingly we address this rejection as it applies to representative claims 7 and 24. Claim 7 recites that the cap has a “spherical surface and has a constant thickness.” Claim 24 recites “wherein said transparent cap comprises a planar sheet having a constant thickness.”

*Rejection under 35 U.S.C. § 102(e) based on Ibbetson*

Appellants’ contentions, on pages 12 through 15 of the Brief, with respect to this rejection present us with the issue: did the Examiner err in finding that Ibbetson teaches a cap with a constant thickness?

*Rejection under 35 U.S.C. § 102(e) based upon Shiiki.*

Appellants’ contentions, on pages 16 and 17 of the Brief, with respect to this rejection present us with the issue: did the Examiner err in finding that Shiiki teaches a cap with a constant thickness?

*Rejection under 35 U.S.C. § 103(a) based Kawai in view of Lin*

Appellants’ argue, on pages 18 of the Brief that this rejection is in error for the reasons discussed with respect to the anticipation rejection of claim 7 based upon Kawai. Thus, Appellants’ arguments directed to this rejection present us with the same issue as discussed with respect to the anticipation of claim 7 based upon Kawai.

*Rejection under 35 U.S.C. § 103(a) based Reeh in view of Mach*

Appellants' contentions, on pages 27 through 29 of the Brief, with respect to this rejection present us with two issues:

a) did the Examiner err in finding that the combination of Reeh and Mach teaches a cap with a constant thickness?

b) did the Examiner err in finding that the skilled artisan would combine Reeh and Mach?

ANALYSIS

*Rejection under 35 U.S.C. § 102(b) based on Kawae.*

Appellants' arguments have not persuaded us that the Examiner erred in finding that Kawae teaches a cap with a constant thickness. With respect to claim 7, the Examiner finds that Kawae teaches that it was known in the prior art to make the cover of a constant thickness. Answer 9. We concur with this finding by the Examiner. We note that the prior art cover is shown in Figures 9 and 10, see paragraphs 0016, 0017. While paragraph 0059 also identifies that using a constant thickness may create an irregular beam pattern, and that the beam pattern can be made more evenly distributed by using a variable thickness cover, the reference does nonetheless teach that the cover can be a constant thickness. Thus, Appellants' arguments have not persuaded us of error in the Examiner's rejection of claims 7, 19, 21, and 23.

With respect to claim 24, the Examiner finds that the cap in Figure 8 appears to be a constant thickness, and that though scale can not be inferred from the Figures, the description in paragraph 0059 would lead the skilled artisan to conclude that the cap in Figure 8 is of a constant thickness. Answer 9-10. We concur with the Examiner's finding. We additionally

note that in the description of Figure 7 with the variable thickness cover which creates evenly distributed beam patterns, there is no discussion in relation with the Figure 8 cover. Rather, we note the covers shown in Figures 8 and 10 are discussed as being similar, albeit for different types of LED, which further supports the Examiner's finding. Thus, we are not persuaded of error in the Examiner's rejection of claim 24.

Appellants' arguments have not addressed the Examiner's rejection of claim 22 as being anticipated by Kawae. Accordingly, we sustain the rejection *pro forma*.

*Rejection under 35 U.S.C. § 102(e) based on Ibbetson*

Appellants' arguments have not persuaded us that the Examiner erred in finding that Ibbetson teaches a cap with a constant thickness. With respect to claim 7, the Examiner finds that paragraph 0050 teaches that the lens 38 is of a constant thickness.<sup>4</sup> Answer 5. We concur with this finding. Paragraph 0050 states that lens include two layers and that they are of uniform thickness. Further, we are not persuaded by Appellants' arguments, on page 15 of the Brief, that paragraph 0052 teach that the thickness of the lens will vary. As stated by the Examiner on page 11 of the Answer, paragraph 0052 is discussing the relationship between thickness of the cover to the size and type of light. Paragraph 0052 does not describe using a cap of varying thickness with some particular light source. Accordingly, Appellants' arguments have not persuaded us of error in the Examiner's

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<sup>4</sup> We note that the Answer contains a typo in that it refers to Figure 5 which does not contain lens item 36 as described in paragraph 50, whereas Figure 3 depicts lens item 36.

rejection of claims 7, 18 through 21 and 23 through 24 as being anticipated by Ibbetson.

*Rejection of claim 24 under 35 U.S.C. § 102(e) based on Shiiki.*

Appellants' arguments have persuaded us that the Examiner erred in finding that Shiiki teaches a cap with a constant thickness. The Examiner states that:

Shiiki shows use of variations of sizes and shapes (see e.g. fig. 3). Therefore one of ordinary skill in the art would understand if Shiiki intended for layer 5 to vary it would have been described. Further, minor changes in the thickness of layer 5 would cause optical shaping. Shiiki does not teach any optical shaping.

Answer 12. We disagree with the Examiner's reasoning as the Examiner has not identified a disclosure in Shiiki that discusses the thickness of the cover and whether it is used for optical shaping. Accordingly, we will not sustain the Examiner's rejection of claim 24 as anticipated by Shiiki.

*Rejection under 35 U.S.C. § 103(a) based on Kawae in view of Lin*

Appellants' arguments have not persuaded us of error in this rejection. Appellants' arguments directed to this rejection present us with the same issue as discussed with respect to anticipation of claim 7. As discussed above, Appellants' arguments have not persuaded us of error in the rejection of claim 7. Thus, we will sustain the Examiner's rejection of claims 18 and 20 under 35 U.S.C. § 103(a) based Kawae in view of Lin.

*Rejection under 35 U.S.C. § 103(a) based on Reeh in view of Mach*

Appellants' arguments have persuaded us that the Examiner erred in finding that the combination of Reeh and Mach teach or suggest a cap with a constant thickness. Initially, we note that this argument only applies to claim 24 as independent claim 22, the other claim included in this rejection, does not recite a limitation directed to a cap being of a constant thickness. The Examiner finds that Reeh suggests that layer 4/6 is of a constant thickness and that if it is not taught it is obvious. The Examiner's rejection has not cited to a teaching in Reeh that discusses the thickness but rather relies upon an interpretation based upon items 29 and 8 in Figures 2 and 3. Answer 13. We do not find that this is sufficient evidence to support a finding that the reference teaches or suggests a constant thickness for the cover. Accordingly, we will not sustain the Examiner's rejection of claim 24.

Appellants' second argument, concerning the combination of Reeh and Mach has not persuaded us of error in the Examiner's rejection. Claim 22 differs from claim 24, as discussed above claim 22 does not recite that the cover is of a constant thickness, but does include a limitation that the cap comprises a planar sheet of a single crystal phosphor. The Examiner finds that Reeh does not teach this limitation but that Mach does. Answer 8. The Examiner reasons that the skilled artisan would apply Mach's single crystal phosphor to Reeh's device to provide long life and provide uniform color. Answer 8-9. We concur with the Examiner's conclusion. The Examiner cites to Mach's background of the invention to show that using single crystal phosphor has these advantages. Answer 13. We concur, column 2, lines 40-59 support this conclusion. Thus, we consider the Examiner to have shown

that combining the teachings of Reeh and Mach is nothing more than the use of known elements to perform their known functions. Accordingly, we will sustain the Examiner's rejection of independent claim 22 under 35 U.S.C. § 103(a) based Reeh in view of Mach.

### CONCLUSIONS

Appellants have not persuaded us of error in the Examiner's rejection of:

- a) claims 7, 19, 21, and 22 through 24 under 35 U.S.C. § 102(b) as being anticipated by Kawae;
- b) claims 7, 18 through 21, and 23 through 24 under 35 U.S.C. § 102(e) as being anticipated by Ibbetson;
- c) claims 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kawae in view of Lin; and
- d) claim 22 under 35 U.S.C. § 103(a) as being unpatentable over Reeh in view of Mach.

However, Appellants' arguments have persuaded us of error in the Examiner's rejection of:

- a) claim 24 under 35 U.S.C. § 102(e) as being anticipated by Shiiki; and
- b) claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Reeh in view of Mach.

### ORDER

As we have sustained at least one rejection of each claim, the Examiner's decision to reject claims 7 and 18 through 24 is affirmed.

Appeal 2009-007195  
Application 10/616,759

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

ELD

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